

Wisconsin Bald Eagle and Osprey Surveys 2003

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Acknowledgments

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A very special thank you to all the individuals, organizations and schools that adopted eagle nests. These people make possible the conservation of Wisconsin's bald eagle population.

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Bald eagle data from 1973 to 1989 was summarized from the annual bald eagle survey flights of Charles Sindelar. Special thanks go to Dave Evans, Rex Runke, Madison Audubon, and Wildlife Management staff for conducting ground observations.

Summary

DNR Wildlife Management staff conducted breeding survey flights using DNR pilots and aircraft. U.S. Fish & Wildlife Service pilots surveyed certain nests along the Upper Mississippi Fish & Wildlife Refuge. The first eagle flight was flown in early April to locate active nests and the second eagle flight was flown in June to count young. The first osprey flight was flown in mid May to locate active nests and the second osprey flight was flown in mid July to count young. Ground observations by volunteers and banders supplemented the aerial checks. Regional reports that detailed all eagle and osprey nest locations and summarized eagle and osprey productivity by county were developed. These reports are on file at the Bureau of Endangered Resources' Natural Heritage Inventory in Madison.

Aerial surveys were conducted along the Mississippi River and the Lower Wisconsin River by DNR staff to locate wintering eagles.

DNR staff and volunteer rehabilitators collected dead and injured eagles. Dead birds were necropsied by DNR Wildlife Management Staff Veterinarians in Madison. Local licensed rehabilitators treated injured birds. Severely injured birds were shipped to The Raptor Center at the University of Minnesota at St. Paul. Eagle carcasses were sent to the National Eagle Repository at Rocky Mountain Arsenal, Colorado. From this repository feathers were sent on request to Native Americans for religious purposes.

Throughout the state, DNR staff contacted private landowners to protect eagle nests from disturbance. On public properties all nests are fully protected from disturbances and habitat is managed to promote large, supercanopy white pines.

Bald Eagles

A total of 880 eagle nest territories were occupied by breeding adults in 2003. This is an increase of 49 pairs from 2002. Occupied means incubation, eggs, young, or a repaired nest was observed. Eagles nested in 57 of the state's 72 counties (Figure 1). At least 947 young were observed in 610 nests in 2003. The 610 nests with known outcomes had an average 1.07 young per occupied territory and 1.55 young per successful territory. Nest success was 69%. Eagle productivity was below average in north central Wisconsin. Table 1 provides a regional summary of productivity and success.

The inland lakes region of northwest and north central Wisconsin held 70% of the state's breeding population of bald eagles. Statewide, the number of young produced in 2003 is at the level needed for the eagle population to continue its overall rate of growth and expansion. For the first time in recorded history, eagles built a nest in the city of Madison near Lake Monona.

Eagle Deaths & Injuries in Wisconsin

DNR staff and volunteers recovered over 90 sick, injured or dead eagles in 2003. The leading cause of death was being hit by a car. Most vehicle collisions occurred when eagles were scavenging car-killed deer. Other common causes of eagle mortality include lead poisoning, electrocution, eagle vs eagle territorial fights, and unspecified wing injuries.

In 2003 six bald eagles were recovered from the lower Wisconsin River and diagnosed with "Wisconsin River syndrome". The syndrome appears to be a nervous system disease expressed by grand mal seizures. Wildlife Health Specialists at the USGS National Wildlife Health Lab and DNR's Wildlife Health Lab were unable to determine the cause of this acute disease. The disease occurred during five different winters since 1994 and appears to be restricted to the lower Wisconsin River.

Eagle Translocation

Four young eagles were taken from nests in northwestern Wisconsin and transferred to the Hudson River in New York City for reintroduction. Since 1975, 207 Wisconsin eaglets have been transferred to six different eastern states for reintroduction. Today, Wisconsin eagles and their descendants live in all these six states.

Osprey

In 2003 there were 405 osprey territories located in Wisconsin. This is an increase of 22 pairs from 2002. These 405 pairs of osprey produced 495 young with 1.22 young per occupied nest, 1.77 young per successful nest, and 69% nest success (Table 2).

North central Wisconsin osprey productivity was 0.93 young per occupied territory, which is well below other regions of Wisconsin. North central Wisconsin ospreys share their northern lake nests with a dense population of breeding bald eagles. For example, Oneida County has 82 pairs of osprey and 103 pairs of bald eagles.

Nesting pairs of osprey declined in north central Wisconsin but continued their slow increase in east central Wisconsin (Figure 2) including nests at Sheboygan Marsh and at Mauthe Lake in the Kettle Moraine State Forest. In far southern Wisconsin ospreys established nests near the city of Portage in Columbia County, near Stoughton in Dane County, and in the city of Madison near Lake Monona.

The statewide 10-year average osprey population size recorded in our surveys was 390 pairs (ranging from 364 to 407 pairs). The osprey population is reproducing at levels that should show a slow growth in the statewide population. However, the statewide population has not expanded since 1995.

The osprey remains listed as a Wisconsin State Threatened Species. Their overall population is less than half that of the statewide eagle population. Ospreys nested in 46 of the state's 72 counties.

Osprey Platforms

DNR Wildlife biologists erected over 200 osprey nest platforms between 1972 and 1993. Osprey nest on these platforms and the platforms provide a secure nest site. Since 1993, various conservation organizations and power companies erected additional nest platforms on power lines and other structures. In 2003 fifteen nest platforms were erected throughout Wisconsin by the Wisconsin Public Service Corporation, the American Transmission Company, Consolidated Water Power Company, DNR, and various conservation groups. Today about 75% of the state's breeding osprey population nest on platforms.

Osprey Translocation

Wisconsin entered the eighth year of the osprey translocation project. Eight osprey chicks were taken from nests in northwest Wisconsin and sent to hatch sites in Iowa with a goal of expanding the range of the Midwest osprey population. The birds were taken from nests with multiple young and one young was always left in the nest. The osprey chicks were given health exams at The Raptor Center in St. Paul before shipment to Iowa. Iowa had their first osprey nest in 2003.

Natural Heritage Inventory

The detailed locations of over 1,000 known eagle nests and over 400 known osprey nests are on file with Wisconsin's Natural heritage Inventory (NHI) in the Bureau of Endangered Resources. The NHI is the repository for all information on Wisconsin's threatened and endangered species. It also tracks rare species and species of special concern. The NHI is used to screen all land use activities that require a state or federal permit and is the primary mechanism used to protect eagles and osprey nests.

Table 1. *Summary of the 2003 Bald Eagle Survey in Wisconsin.*

Locality in Wisconsin	Occupied Territories	Successful Territories	Total Young	Young Per Occupied	Young Per Successful	Percent Nest Success
Northwest	333	236	359	1.07	1.52	71
North Central	283	175	264	0.93	1.50	61
NE & East	93	65	104	1.11	1.60	67
Central	31	24	41	1.32	1.70	77
West Central	111	82	122*	1.10	1.48	74
Southern	29	28	57	1.96	2.03	100
Total	880	610	947	1.07	1.55	69

*Minimum count because of a dense leaf canopy over some nests.

Table 2. *Summary of the 2003 Osprey Survey in Wisconsin.*

Locality in Wisconsin	Occupied Territories	Successful Territories	Total Young	Young Per Occupied	Young Per Successful	Percent Nest Success
Northwest	124	88	159	1.28	1.80	71
North Central	151	93	155	1.02	1.66	61
NE & East	73	48	90	1.23	1.89	65
Central	36	32	61	1.69	1.90	88
West Central	18	16	26	1.44	1.62	88
Southern	3	2	4	1.33	2.00	100
Total	405	279	495	1.22	1.77	69

Occupied Bald Eagle Territories 2003 Total = 880

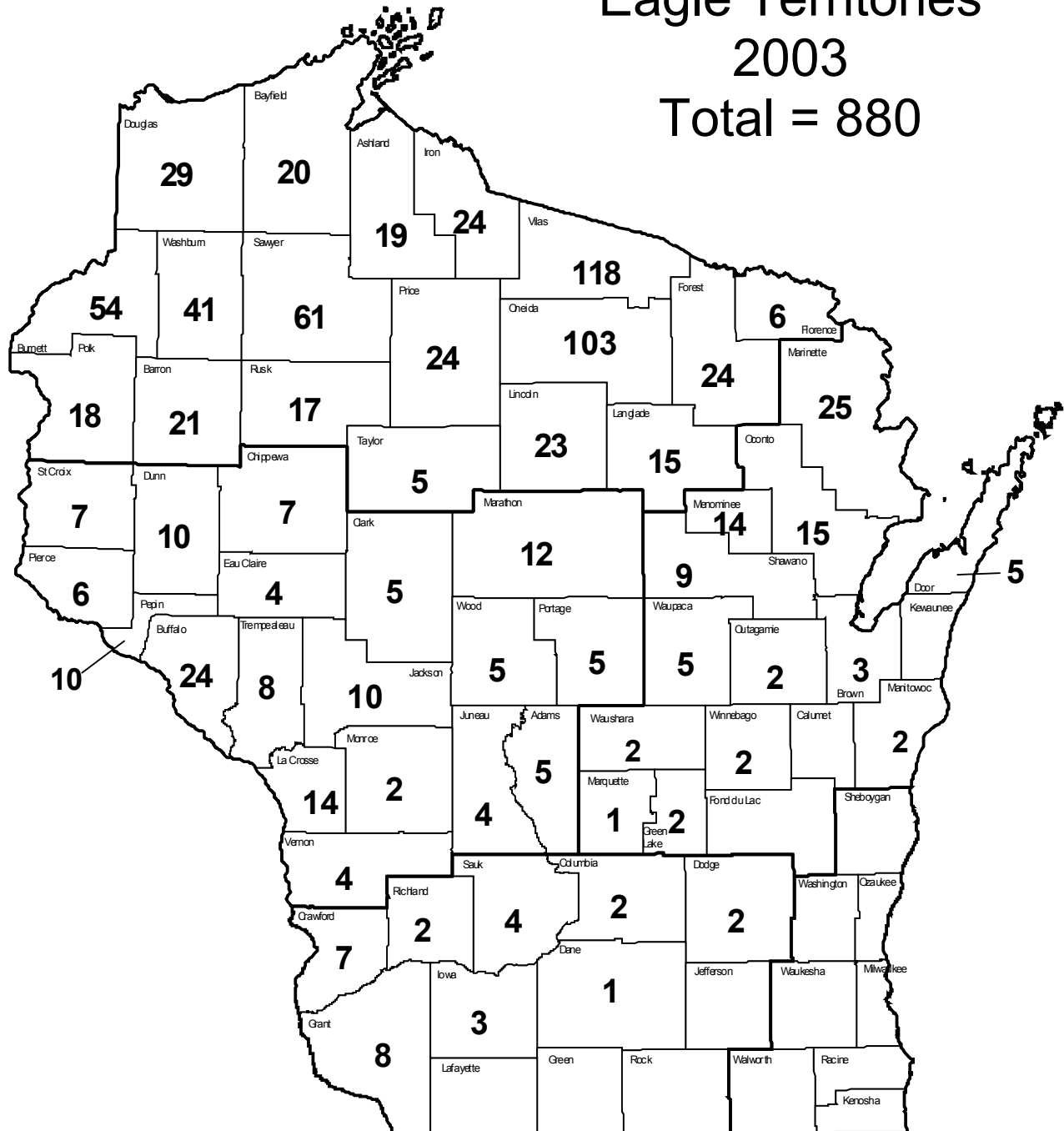


Figure 1. Occupied eagle territories are those territories where the observer recorded at least one of the following: a repaired nest, an incubating adult, eggs, or young in the nest.

Territories

2003

Total = 405

The map displays the following population counts for the highlighted counties:

- Douglas: 6
- Bayfield: 2
- Ashland: 2
- Iron: 16
- Vilas: 25
- Washburn: 16
- Sawyer: 27
- Pierce: 10
- Oneida: 82
- Forest: 20
- Flambeau: 4
- Marquette: 17
- Lincoln: 16
- Langlade: 8
- Chippewa: 28
- Rusk: 2
- Baron: 4
- St. Croix: 4
- Dunn: 8
- Taylor: 3
- Clark: 1
- Marathon: 8
- Menominee: 10
- Shawano: 2
- Door: 2
- Kewaunee: 2
- Winnebago: 3
- Calumet: 4
- Manitowish: 7
- Sturgeon: 1
- Fond du Lac: 3
- Washington: 1
- Ozaukee: 1
- Waukesha: 1
- Milwaukee: 1
- Racine: 1
- Kenosha: 1
- Walworth: 1
- Rock: 1
- Green: 1
- Lafayette: 1
- Gent: 1
- Clark: 1
- Richard: 1
- Sauk: 1
- Columbia: 1
- Dodge: 1
- Dane: 1
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Figure 2. Active osprey territories are those territories where the observer recorded at least one of the following: at least one adult at a repaired nest, an incubating adult, eggs or young in the nest.

WISCONSIN EAGLE NEST SURVEY, 1973 - 2003

Occupied Territories

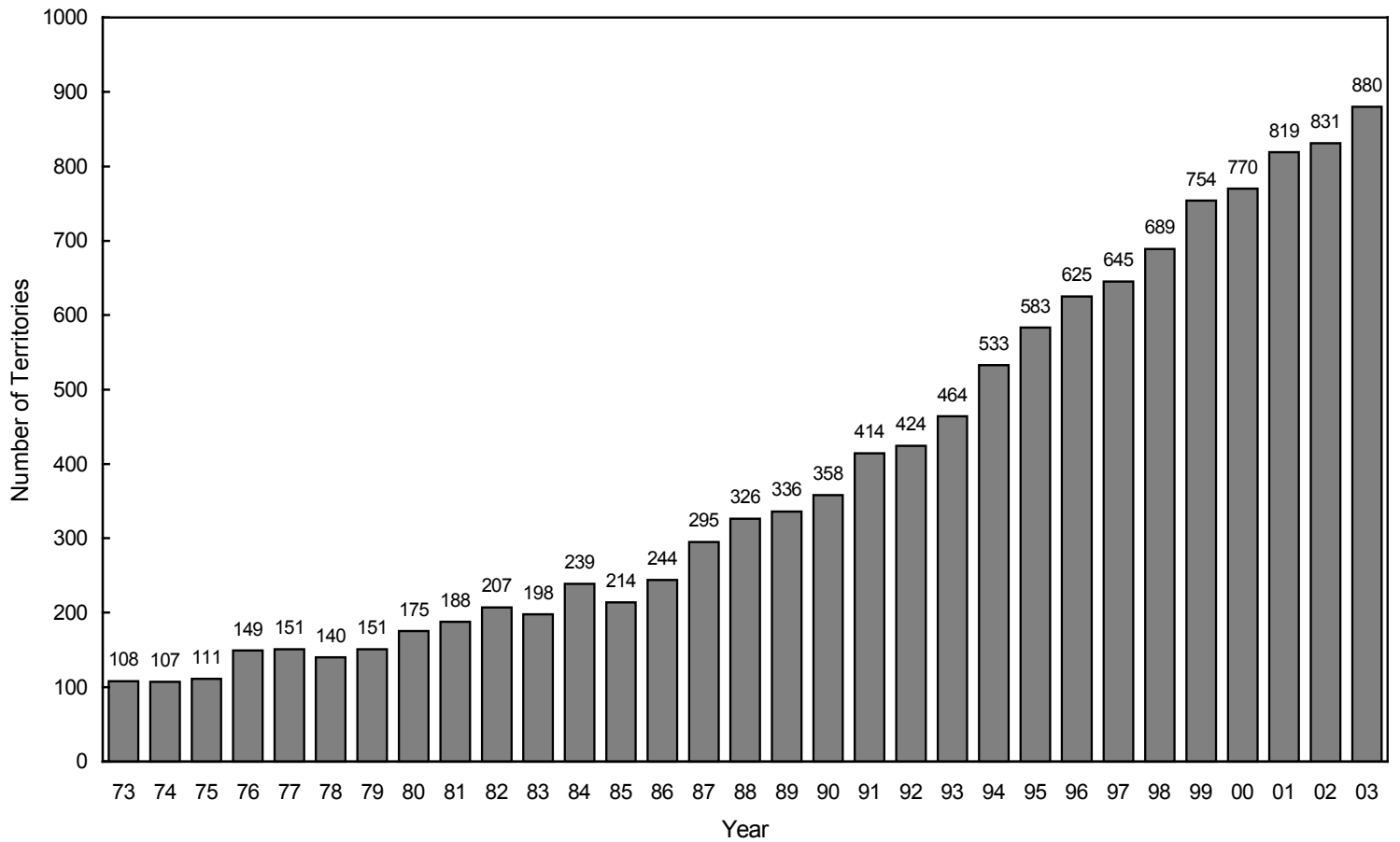


Figure 3. *Number of occupied eagle territories 1973-2003.*

WISCONSIN OSPREY NEST SURVEY, 1973 - 2003

Active Territories

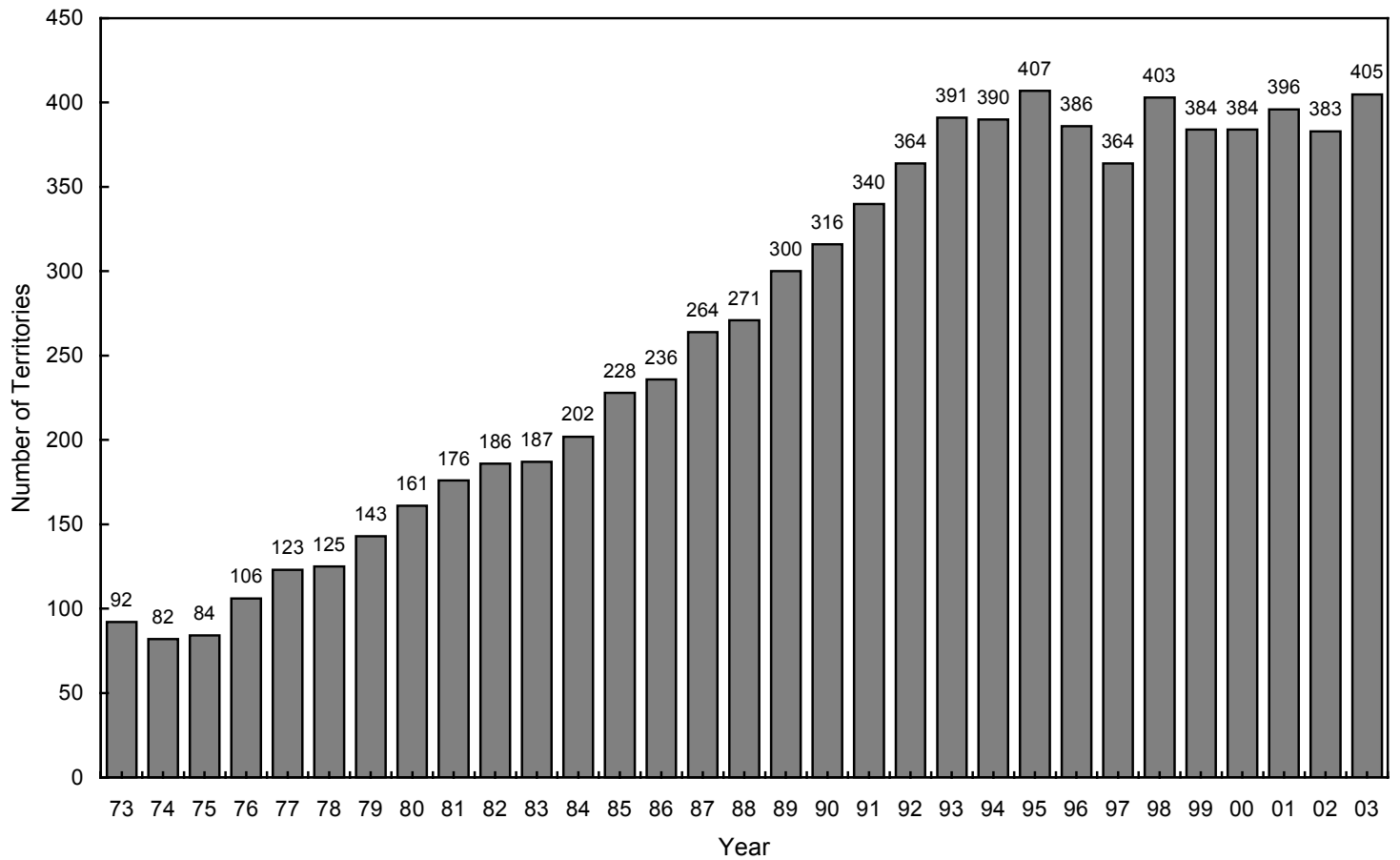


Figure 4. *Number of active osprey territories 1973-2003.*